A new climate of fairness.



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Bureau of Land Management-Eastern States
20 M Street, Suite 950
Washington, D.C. 2003

Re: Protest of December 13, 2016 Lease Sale

Dear State Director:

Fair Shake Environmental Legal Services hereby files this Protest of the Bureau of Land Management ("BLM")'s planned December 13, 2016 oil and gas lease sale, pursuant to 43 C.F.R. § 3120.1-3, on behalf of FreshWater Accountability Project, Athens County Fracking Action Network, Buckeye Forest Council, Ohio Valley Environmental Coalition, Appalachian Mountain Advocates, Torch CAN DO, West Virginia Highlands Conservancy, Mountain Lakes Preservation Alliance, Radioactive Waste Alert, Columbus Community Bill of Rights, Guernsey County Citizens' Support on Drilling Issues, Frack Free Lake County, Sustainable Medina County, Ohio Allies, Frack Free Geauga, Network for Oil & Gas Accountability & Protection, Concerned Citizens Ohio, Friends for Environmental Justice, FaCT-Faith Communities Together for a Sustainable Future, Northwest Ohio Alliance to Stop Fracking, The Committee for the Youngstown Community Bill of Rights, Ohio Community Rights Network, Concerned Citizens of New Concord, Ohio River Citizens' Alliance, Ashtabula County Water Watch, and Headwaters Defense.

This letter is a formal protest of the inclusion of each of the following parcels located in the State of Ohio:

ES-004-12/2016 OHES 058185 ACQ
ES-006-12/2016 OHES 058185 ACQ
ES-008-12/2016 OHES 058185 ACO
ES-010-12/2016 OHES 058185 ACQ
ES-012-12/2016 OHES 058185 ACQ
ES-014-12/2016 OHES 058185 ACQ
ES-016-12/2016 OHES 058185 ACQ
ES-018-12/2016 OHES 058185 ACQ
ES-020-12/2016 OHES 058185 ACQ
ES-022-12/2016 OHES 058185 ACQ
ES-024-12/2016 OHES 058185 ACQ

ES-025-12/2016 OHES 058185 ACQ	ES-026-12/2016 OHES 058185 ACQ
ES-027-12/2016 OHES 058185 ACQ	ES-028-12/2016 OHES 058185 ACQ
ES-029-12/2016 OHES 058185 ACQ	ES-030-12/2016 OHES 058185 ACQ
ES-031-12/2016 OHES 058185 ACQ	ES-032-12/2016 OHES 058185 ACQ
ES-033-12/2016 OHES 058185 ACQ	ES-034-12/2016 OHES 058185 ACQ
ES-035-12/2016 OHES 058185 ACO	

These parcels are publicly owned lands located within the Wayne National Forest. If BLM proceeds with the sale of leases for these parcels, its actions will constitute significant substantive and procedural violations of federal law. For the reasons set forth below, BLM should withdraw these parcels from the lease sale.

PROTEST

1. Protesting Parties and Their Interests

This protest is filed on behalf of the following parties:

FreshWater Accountability Project

FreshWater Accountability Project ("FWAP") is a nonprofit organization committed to ensuring that government officials and industry are directly responsible and responsive to the public on energy issues that impair the commons of Ohio's water and land resources. FWAP's members live, work, and recreate in the State of Ohio. FWAP's mission includes educating people about freshwater supplies in Ohio by providing an online archive of studies and public documents related to energy development and resource management within the State. Through its education and advocacy efforts, FWAP assists the people of Ohio in advocating at the local, state, and federal levels of government to ensure Ohio's water is protected, and in turn, that Ohio's future is preserved.

Athens County Fracking Action Network

Athens County Fracking Action Network ("ACFAN") formed in 2011 to protect the Wayne National Forest and our region from the risks to air, water, climate, and community, economic, and public health from the industrial practice of deep shale drilling and high-pressure, high-volume horizontal fracturing (commonly known as fracking). ACFAN's 900+ network members have consistently urged Wayne and BLM personnel to fully evaluate the potential highly significant impacts of fracking before leasing an irrevocable commitment of resources, with full public input, as required by NEPA. This has involved thousands of appeals and documentation of potential impacts with extensive peer-reviewed science through petitions, meetings, letters, and formal protests since October 2011. ACFAN has mobilized government officials from the local to federal levels, drinking water suppliers, environmental and tourism organizations, the President of Ohio University, hundreds of residents of Washington, Monroe, and Morgan County, and thousands of other residents of Ohio, the region, and the nation to urge the USFS to authorize an Environmental Impact Statement before further consideration of this dangerous industrial process, as required by NEPA given the scale of likely harm to the human

community as well as to the Forest. Especially because the Wayne is Ohio's only National Forest and one of the nation's smallest and most fragmented, members of ACFAN are highly committed to its protection and to the U.S. Forest Service and BLM taking seriously the extreme and well documented public concerns that have been shared extensively with USFS and BLM officials since 2011.

Buckeye Forest Council

Buckeye Forest Council ("BFC") is a membership-based, grassroots organization dedicated to protecting Ohio's native forests and their inhabitants through education, advocacy and organizing. BFC has advocated for ecological management of the Wayne National Forest as well as Ohio's state forests to protect biodiversity, ecosystem services, including air and water purification, and climate stability since 1992. Many hundreds of BFC members from around Ohio and beyond our region have relied on Wayne National Forest as a place of solace, protected wildland, native forest biodiversity, and low-impact recreation.

Ohio Valley Environmental Coalition

The Ohio Valley Environmental Coalition ("OVEC") is a nationally recognized grassroots organization dedicated to preserving and protecting our natural heritage. OVEC, formed in 1987, and is a 501(c)(3) nonprofit organization. OVEC's mission is to organize and maintain a diverse grassroots organization dedicated to the improvement and preservation of the environment and communities through education, grassroots organizing and coalition building, leadership development, strategic litigation, and media outreach. Their work encompasses much of West Virginia and the Ohio Valley.

Appalachian Mountain Advocates

Appalachian Mountain Advocates is a non-profit law and policy center dedicated to fighting for clean water and a clean energy future. Appalachian Mountain Advocates has seen that hydraulic fracturing is destroying water sources and communities across Appalachia. The infrastructure associated with hydraulic fracturing and bringing the recovered natural gas to market calls for massive multi-state pipelines that cut through mountains, prime forests and private land, leaking potent greenhouse gases like methane along the way. Appalachian Mountain Advocates holds that every dollar spent in natural gas development would be more wisely spent in clean energy production, and is committed to fighting investment in further natural gas development in order to make space in the market for affordable renewables.

Torch CAN DO

Torch CAN DO (Torch Clean Air Now, Defend Ohio) is a community group that assembled in the summer of 2015 in response to the injection well and hydraulic fracturing waste handling operation in Torch, Ohio. This experience lead Torch CAN DO to commit itself to protecting Ohio's environment and communities from further harm from hydraulic fracturing and unconventional gas development.

West Virginia Highlands Conservancy

The West Virginia Highlands Conservancy provides education, advocacy, conservation, and preservation of the highlands area of West Virginia. The Conservancy's conservation efforts now try to match the threats to areas such as Wayne National Forest.

Mountain Lakes Preservation Alliance

Based in Upshur County, WV, Mountain Lakes Preservation Alliance ("MLPA") is a multi-county action group that has been engaging public officials and educating the public about hydraulic fracturing and pipelines since early 2014. MLPA has an interest in safeguarding water quality for all people, no matter the state, but MLPA has a direct interest in the Wayne National Forest proposed lease auction because Ohio is MLPA's neighbor and they both occupy the Appalachian Mountain Chain. MLPA believes that Forest land and historic resources must be carefully and intentionally preserved, not only for future generations, but for current enjoyment of the land for purposes of tourism, economic development, and quality of life. Public health is a major concern where gas drilling, gas infrastructure, or oil and gas transport are concerned, due to the chemicals released during fracking and the methane released into the atmosphere throughout the process. MLPA believes it is crucial that we develop renewable energies and energy efficiency, and not further invest in outdated infrastructure, especially of types that are injurious to the water, the landscape, and people of social or economic minority. West Virginia and Ohio have significant populations of poor and undereducated people who are especially susceptible to exploitation of an industry (fossil fuel extraction) which has a history of such exploitation. In this time of climate disruption, MLPA believes it is essential that we make a just transition to a new energy profile and economic model, which is within our reach, and that we have a duty to protect our water, air; soil, economies, and public health, both now and for future generations.

Radioactive Waste Alert

Radioactive Waste Alert's mission is to protect the water supply for Columbus, to protect Ohioans' homes, and to protect Ohio from radioactive waste produced from hydraulic fracturing and other unconventional methods of natural gas extraction. Radioactive Waste Alert stands to ban all radioactive waste from hydraulic fracturing and other unconventional methods of natural gas extraction from being dumped in Ohio landfills and injected into Ohio land in the Columbus watershed area, and all of Ohio. Radioactive Waste Alert's objective is to raise awareness and provide information and opportunities for citizens to take action regarding this present and growing danger in Ohio's communities.

Columbus Community Bill of Rights

Columbus Community Bill of Rights ("CCBR") is a grassroots organization committed to protecting Ohio's water, air, soil, and rights for local self-governance. CCBR members work to create the "Columbus Community Bill of Rights" to ensure pure water, clean air, safe soil, and local control over hydraulic fracturing and associated waste in their community and throughout

Ohio. CCBR members have enjoyed the Wayne National Forest for recreational and educational purposes and intend to continue to do so in the future.

Guernsey County Citizens' Support on Drilling Issues

Guernsey County Citizens' Support on Drilling Issues provides education and information in a forum that is supportive of those impacted by horizontal hydraulic fracturing, its infrastructure, and the waste products that result from it.

Frack Free Lake County

Frack Free Lake County ("FFLC") is a grassroots citizens group committed to protecting Ohio's environment and public health from the risks associated with hydraulic fracturing and other unconventional methods of natural gas development. FFLC believes that the Wayne National Forest, as Ohio's largest forest, is an essential part of a healthy ecosystem that should not be disrupted or contaminated by industrial or mining processes. FFLC wishes to prevent the adverse consequences to the environment that would occur from leasing within the Wayne National Forest and to our planet that cannot be fully measured, but are significant, and long lasting.

Sustainable Medina County

Sustainable Medina County works to protect Medina County's environment and the environment of Ohio at large, in order to ensure a healthy ecosystem for today's residents and future generations. Sustainable Medina County members value the environmental importance of the Wayne National Forest as Ohio's only national forest.

Ohio Allies

Ohio Allies is a grassroots citizen group with members who have visited the Wayne National Forest for recreational and educational purposes and intend to continue doing so in the future. Ohio Allies wishes to protect Ohio's only national forest, which provides essential habitat for many animals including a returning population of beaver, otter, coyote, bear, and bobcat, and which is home to over 2,000 species of native plants. Ohio Allies is also concerned about preserving the rich cultural heritage preserved in the forest, including mounds and prehistoric earthworks from the Adena and Hopewell cultures.

Frack Free Geauga

Frack Free Geauga is a grassroots citizen group committed to protecting Ohio's clean water and natural environment from the adverse impacts of hydraulic fracturing and unconventional oil and gas development. Frack Free Geauga has members who recreate in the Wayne National Forest and is invested in ensuring that Ohio's only national forest is protected, and that federal lands are not used for further investment in hydraulic fracturing, which poses significant risks to Ohio's public health and safety and the health of Ohio's ecosystems.

Network for Oil & Gas Accountability & Protection

Network for Oil & Gas Accountability & Protection ("NEOGAP") is organized to educate, empower, and advocate for the citizens of Ohio who are facing threats to health, safety, and property rights posed by oil and gas development. NEOGAP seeks to help Ohio become a place where property rights and local control are fully respected; where oil and gas development throughout the state occurs using only methods that protect water, air, soil quality, and human health and safety; and where laws and regulations support this vision.

Concerned Citizens Ohio

Concerned Citizens Ohio ("CCO"), a grassroots group under the fiscal sponsorship of the Ohio Organizing Collaborative, has the mission of educating the public and elected officials about the dangers from the impacts of oil and gas activities, including extraction, production, waste disposal, and transport. CCO believes that oil and gas activities in the Wayne National Forest will create long term harms to soil, air, surface and ground water, and that the appropriate use of the forest is as an area not only for recreation for citizens but also as an environment through which water moves in its natural migration for the recharging of aquifers. With so much industry and population dispersion already developed, research shows that it is vital to keep areas still undeveloped untouched, without the intrusion of industrial activities. CCO strongly opposes oil and gas activities in the Wayne National Forest. CCO is concerned about clear-cutting, roads, pipelines, noise, soil disruption and movement, earthquake potential, direct aquifer contamination, and the impacts of the over 1,000 chemicals and chemical compounds associated with oil and gas development. In addition, so little is known about the long term toxic effects of these activities on human development and reproduction that, where possible, oil and gas should not be introduced. Finally, within the next two decades, more areas of Ohio will be powered by solar and wind resources, and oil and gas exploration will have decreased. A decade of activity by the oil and gas industry in the Wayne National Forest will take the forest biome several decades to remediate, with remediation of some contamination impossible.

Friends for Environmental Justice

Friends for Environmental Justice ("FFEJ") aids in the protection of the health of people, water and land against extractive and other polluting industries. FFEJ is committed to working with communities through education, support, and media.

FaCT - Faith Communities Together for a Sustainable Future

FaCT – Faith Communities Together for a Sustainable Future ("FaCT Ohio") is a 501(c)(3) tax-exempt public charity incorporated as a non-profit organization in the State of Ohio. Their membership is composed of individuals, lay, clergy, and religious from many different faith traditions belonging to faith communities in places throughout Ohio. FaCT Ohio is dedicated to an Ohio where clean, renewable energy is safely produced and where citizens value clean air, water, and soil. They are committed to ensuring that any extraction, transport, processing, or transmission of hydrocarbons is done in the safest possible manner under the guidelines of thorough and appropriate regulations that are rigorously enforced, so the rights of

workers, landowners, and the community are honored and respected. FaCT opposes hydraulic fracturing because of the risk it poses to public health and the environment. FaCT Ohio considers the Wayne National Forest, as Ohio's largest forest, an essential part of a healthy ecosystem that should not be disrupted or contaminated by industrial or mining processes. Wayne National Forest contains water resources, animal habitat, and historic sites that are of paramount importance to the people of Ohio, including FaCT Ohio's members, that need to be carefully preserved.

Northwest Ohio Alliance to Stop Fracking

Northwest Ohio Alliance to Stop Fracking ("NWOASF") is an advocacy community group seeking to educate Ohioans about the toxicity of fracking and the dangers of its infrastructure, particularly pipelines, compressor stations, and processing facilities that threaten clean air and water. NWOASF seeks to prohibit the fracking of Ohio's only National Forest because of the long-term detrimental impact to the local economy and the justification it will give to infrastructure build-out, especially the huge pipelines planned to take gas to export markets.

Committee for the Youngstown Community Bill of Rights

The Committee for the Youngstown Community Bill of Rights ("CYCBR") formed for the purpose of protecting Mill Creek Park from the negative consequence of oil and gas development. When an injection well drilled in the center of Youngstown likely caused a 4.0 earthquake and concerned citizens discovered that four injection wells had been drilled in their drinking water watershed of the Meander Reservoir, CYCBR took action. By collecting citizen signatures, CYCBR placed Youngstown Community Bill of Rights on the ballot to protect Youngstown residents' homes, drinking water, and park. CYCBR has continued to educate the public and has fought for public health and safety. CYCBR members have enjoyed the Wayne National Forest for recreational and educational purposes and intend to continue doing so in the future. CYCBR members seek to protect the Wayne National Forest and the Ohio River from any negative impacts that these valuable natural resources would experience as a result of hydraulic fracturing in the Wayne National Forest.

Ohio Community Rights Network

Ohio Community Rights Network is a grassroots community organization that works to establish a network of communities working to advance, secure, and protect the inalienable rights of all Ohioans to democratic, local self-governance, to sustainable food, energy, economic systems, and the rights of nature to exist and flourish throughout Ohio.

Concerned Citizens of New Concord

The Concerned Citizens of New Concord is a community organization composed of residents of New Concord, Ohio and the surrounding areas. The group's purpose is to give New Concord area residents a vehicle for working together to express concerns and become more involved in environmental issues directly affecting the safety and quality of the water, air, and

ground of their region, state, and country. The Wayne National Forest is a valuable resource to members of the community group who recreate in the Forest and live and work in the surrounding area.

Ohio River Citizens' Alliance

Ohio River Citizens' Alliance ("ORCA") is a multi-state alliance of grassroots groups in the Ohio River Basin. They have organized to protect our watersheds as they flow into the Ohio River. ORCA's primary goal is to be prepared to react quickly in responding to threats of all types to our precious water supply, especially fossil fuel energy and the waste stream it produces.

Ashtabula County Water Watch

Ashtabula County Water Watch ("ACWW") is an all-volunteer group of concerned residents who have been working together since 2012 to address issues related to water quality, ecosystem health, and the wellbeing of rural and urban communities in Ashtabula County and throughout Ohio. ACWW members began meeting in response to the increase in local oil and gas lease-signing because they found that their friends and neighbors were faced with difficult decisions about hydraulic fracturing on their property, combined with a severe lack of information. ACWW focuses a great deal on waste from unconventional natural gas development because Ashtabula County has the second highest number of injection wells in Ohio. The citizen group works on issues that threaten the quality of Ohio's water, and the health of Ohio's ecosystems and communities. These include not only injection wells, but also byproducts of the gas and oil industry being sprayed on Ohio's roads, Superfund sites, and gas-to-liquid refineries. ACWW strives to protect clean water, especially when it runs through publiclyowned lands, such as the Wayne National Forest. ACWW is deeply concerned about the future of Ohio's only national forest, where its members have enjoyed recreating, and which is one of Ohio's natural treasures.

Headwaters Defense

Headwaters Defense is a grassroots environmental justice organization dedicated to the protection and restoration of water and ecosystems in Central Appalachia. Formed in 2015 in West Virginia, this organization works to protect the source water for rivers and bodies of water that provide clean drinking water to Appalachian communities and support vital ecosystem functions throughout the Appalachian Region. Central Appalachia serves as the headwaters for hydrologic systems stretching from the Great Lakes down to the Mississippi River and across to the Atlantic Coast. All the communities and ecosystems in this vast area are downstream of the industrial production occurring in Central Appalachia. Headwaters Defense is aware of the toxic impacts of industrial extraction of fossil fuels such as oil, gas, and coal, and knows that all aspects of the fossil fuel production process (extraction, refinement, transportation, combustion, and waste disposal) pose threats to water. Headwaters Defense is committed to defending our headwaters and our drinking water from the impacts of industrial fossil fuel infrastructure.

2. Wayne National Forest

Wayne National Forest is Ohio's only National Forest and is a critical public natural resource for the state of Ohio and the United States of America. The Forest covers over a quarter million acres of Appalachian foothills and is divided into the Athens, Marietta, and Ironton Units. The Marietta Unit covers over 60,000 acres and contains extensive wildlife habitat and environmental resources, cherished outdoor recreational spaces, and historic sites.

3. Statement of Reasons as to Why the Proposed Lease Sale is Unlawful

I. BLM Violated the National Environmental Policy Act ("NEPA") by not preparing an EIS

A. NEPA Requires that an EIS be Prepared Prior to the Proposed Lease Sale

BLM and the Forest Service must prepare a full Environmental Impact Statement ("EIS") in order to take the requisite "hard look" at the environmental impacts of leasing these parcels. NEPA requires that an EIS be prepared for "any major Federal actions significantly affecting the quality of the human environment." 40 C.F.R. §1501.2 mandates that agencies "integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts." The fact that the federal agency action at issue involves the decision to lease, which is the necessary precursor to the eventual oil and gas development that would take place, does not mean that the agency may delay carrying out the "hard look" demanded by NEPA. Such a piecemeal approach to NEPA's requirements weakens the statute's very purpose and causes undue delay. "NEPA is not designed to postpone analysis of an environmental consequence to the last possible moment. Rather, it is designed to require such analysis as soon as it can reasonably be done."

To determine whether a federal action has a significant impact on the human environment, the agency is to look at a list of ten factors provided by the statute, and to consider those factors within the context at issue. The presence of any one of these factors may be enough to require the preparation of an EIS. The BLM lease sale implicates many of the listed factors including:

The degree to which the proposed action affects public health or safety.

The degree to which the effects on the quality of the human environment are likely to be highly controversial.

¹ See Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989); Strycker's Bay Neighborhood Council v. Karlen, 444 U.S. 223, 231 (1980). See also Center for Biological Diversity v. United States DOI, 623 F.3d 633, 642 (9th Cir. 2010); N.M. ex rel. Richardson v. BLM, 565 F.3d 683, 717 (10th Cir. 2009).

² 42 U.S.C. § 4332(2)(C); 40 C.F.R. §1502.3

³ Kern v. U.S. Bureau of Land Management, 284, F.3d 1062, 1072 (9th Cir. 2002).

^{4 40} C.F.R. 1508.27

³ National Parks & Conservation Ass'n v. Babbit, 241 F. 3d 722, 731 (9th Cir. 2001); Ocean Advocates v. Army Corps of Engineers, 402 F.3d 846, 865 (9th Cir. 2004).

The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into smaller component parts.

The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.⁶

As described in this letter, the leasing of the protested parcels threatens public health and safety, how the leasing itself is connected to other actions with significant cumulative environmental impacts, how the leasing is likely to adversely affect endangered and threatened species and critical habitat, and how proceeding forward with the sale will be in violation of federal law and international requirements imposed for the protection of the environment under the recently signed Paris Agreement.

Additionally, "preparation [of an EIS] is mandated where uncertainty may be resolved by further collection of data, or where collection of such data may prevent speculation on potential effects." Further data collection on the impacts of hydraulic fracturing on the human environment and public health may resolve the uncertainty currently surrounding this activity.

Lastly, the controversial nature of hydraulic fracturing is widely known. As one example, New York State DEC determined that the risks posed to public health and the environment by hydraulic fracturing are great enough to justify the state's outright prohibition on the practice. Courts have held that a proposal is highly controversial when there is a "substantial dispute [about] the size, nature, or effect" of the action. The Ninth Circuit has clarified that

[a] substantial dispute exists when evidence raised prior to the preparation of an EIS or FONSI....casts serious doubt upon the reasonableness of an agency's conclusions. NEPA then places the burden on the agency to come forward with a well-reasoned explanation demonstrating why those responses disputing the EA's conclusions do not suffice to create a public controversy based on potential environmental consequences. The term well-reasoned is simply a less direct way of saying that the explanation must be convincing.⁹

⁶ 40 C.F.R. § 1508.27(b)(2), (4), (5), (7), (9), & (10).

⁷ Native Ecosystems Council v. U.S. Forest Serv., 428 F.3d 1233, 1240 (9th Cir. 2005).

⁸ Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1212 (9th Cir. 1998).

⁹ National Parks Ass 'n v. Babbit, 241 F.3d 722, 736 (9th Cir. 2001) (internal quotations and citations omitted).

BLM's proposed lease sale of the specified parcels constitutes a federal action with a significant environmental impact. Thus, at least until BLM has completed an EIS, proceeding with the lease sale is a violation of NEPA.

B. The EA and FONSI Were Insufficient to Meet the Requirements of NEPA

BLM failed to even prepare an adequate Environmental Assessment ("EA") for the proposed lease sale, but instead prepared a programmatic EA for the general leasing of the approximately 40,000 acres of federal mineral estate beneath National Forest System lands within the Wayne National Forest, Athens Ranger District, Marietta Unit. This programmatic EA did not include any analysis of the proposed lease sale, and thus, also did not include any site-specific analysis of the foreseeable impacts of the proposed lease sale. Without completing the requisite EA for the proposed activity, BLM concluded the lease sale was not a "major federal action" and that the sale "will not significant affect the quality of the human environment."

BLM justified its Finding of No Significant Impact ("FONSI") by claiming that the leasing is purely an administrative act, having no environmental implications in and of itself, and therefore no further analysis under NEPA is required until the leases enter the development stage. However, federal courts have rejected this piecemeal and delayed approach to the application of NEPA requirements, and have clarified that "NEPA requires BLM to conduct site-specific analysis before the leasing stage." Without conducting this site-specific analysis, BLM issued a FONSI based upon the notion that all "[i]mpacts associated with future oil and gas development would be controlled through the use of BMPs, SOPs, mitigation measures, and lease stipulations to minimize potential adverse impacts." However, this conclusion is baseless without site-specific analysis at the parcel level to determine the efficacy of such mitigation measures.

In its FONSI, BLM inappropriately relies on the 2006 Forest Plan EIS and the 2012 SIR to justify its decision that no EIS is needed for the proposed lease sale. There is no discussion of the impact of hydraulic fracturing on the Wayne National Forest in the 2006 Forest Plan EIS, yet the 2012 SIR claims that "the environmental impacts of high volume, horizontal fracturing technology can be kept within the range of impacts analyzed and disclosed in the 2006 Forest Plan Final Environmental Impact Statement" because the amount of surface disturbance is within the amount of surface disturbance analyzed in the 2006 EIS and "the regulations enforced by the BLM and Ohio Department of Natural Resources (ODNR) and measures described by the 2006 Forest Plan reduce impacts from land clearing and other activities that may impact wildlife habitat and populations." BLM's suggestion that the existence of environmental regulations is sufficient to reduce any environmental impact of the proposed sale to an insignificant degree is misguided. The existence of such regulations do not absolve BLM of meeting its "hard look" requirement under NEPA, nor do they absolve BLM of its duty under NEPA to disclose to the

¹⁰ Environmental Assessment Oil and Gas Leasing, Wayne National Forest, Marietta Unit of the Athens Ranger District, Monroe, Noble, and Washington Counties, Ohio, DOI-B LM-E5-0030-2016-0002- EA, ("EA") Finding of No Significant Impact at 5-10[hereinafter "FONSI"].

¹¹ New Mexico ex el. Richardson v. Bureau of Land Management, 565 F.3d 683, 688 (10th Cir. 2009).

¹² FONSI, at 8.

public all foreseeable impacts of its proposed action. The argument that surface disturbance is within the amount of surface disturbance assessed under the 2006 EIS, if even valid, completely ignores the unique impacts hydraulic fracturing has been shown to have on air quality, water resources, and public health. These foreseeable impacts must be thoroughly analyzed and disclosed. The 2012 SIR's argument that "the environmental impacts of high volume, horizontal fracturing technology can be kept within the range of impacts analyzed and disclosed" in the 2006 Forest Plan EIS cannot legally substitute for an EIS for the proposed lease sale that takes a "hard look" at the direct and indirect impacts that the opening of the Wayne National Forest to hydraulic fracturing will have on the human environment.

For the reasons stated above and further explained in the sections that follow, BLM's general programmatic EA and FONSI are insufficient and moving forward with the proposed lease sale would be in violation of NEPA.

II. BLM Failed to Assess the Impact the Proposed Lease Sale Will Have on Private Mineral Development in the Area and the Foreseeable Environmental Consequences of that Development

The EA acknowledges that "leasing of federal minerals in the Marietta Unit may lead to additional development on private lands," but fails to adequately acknowledge and account for the environmental impacts of this private mineral development. The EA, the 2006 Forest Plan EIS, the 2012 SIR, and the 2004 Reasonably Foreseeable Development Scenario all fail to account for the environmental impact the opening of the Wayne National Forest will have as a result of the likely increase in private mineral development. The EA states that "[e]nabling oil and gas activities will provide private landowners the opportunity to develop their minerals," while "withholding leasing federal minerals will pose an obstacle to the development of private minerals." Yet BLM does not analyze the extent to which private mineral development will occur and the impact that this private development will have on the human environment, despite this being a foreseeable environmental consequence of BLM's proposed action.

BLM's inclusion of Appendix C: Permitting of Oil and Gas Operations on Non-Federal Surface, which describes the state and federal agencies (such as the Ohio Department of Natural Resources, Ohio Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and U.S. Environmental Protection Agency) with jurisdiction over private land and mineral development, is not a substitute for an analysis of the foreseeable environmental and public health impacts of the private mineral development that will result from opening federal minerals to leasing. Under NEPA, BLM must take a "hard look" at the foreseeable indirect and direct environmental impacts of its proposed action. In this case, BLM's proposed action is likely to lead to further development of private minerals, while refusing to lease the protested parcels presents an obstacle for such private mineral development. This unaccounted for private development has implications for ground and surface water resources,

¹⁴ Environmental Assessment Oil and Gas Leasing, Wayne National Forest, Marietta Unit of the Athens Ranger District, Monroe, Noble, and Washington Counties, Ohio, DOI-B LM-E5-0030-2016-0002- EA, at 124, 125. [hereinafter "EA"].

is EA, at 21.

public health, air quality, climate change, endangered and threatened species and their habitat, among other environmental concerns. Thus, the magnitude of the impacts of the proposed sale on the human environment cannot be adequately assessed without including such an analysis. Until BLM has analyzed the environmental impacts of the increased private mineral development that is likely to occur as a result of opening the Wayne National Forest to leasing, BLM is in violation of NEPA and may not proceed with the proposed lease sale.

III. BLM Has Not Properly Assessed the Impacts to Ground Water and Surface Water Resources as Required Under NEPA

The EA states that "[i]f the parcels are developed the wells would likely be completed using hydraulic fracturing (HF) techniques." BLM provides negligible analysis of the impact of hydraulic fracturing, horizontal drilling, and other unconventional extraction methods on the impact of water resources of the Wayne National Forest and the surrounding communities. A number of waterways cross or run adjacent to the parcels to be developed. The groundwater systems in the Wayne National Forest do not include discrete aquifers in the classical sense and flow almost exclusively through fractures, making drinking water production dependent on the well contacting adequate fractured layers of groundwater bearing bedrock. The EA does not identify the waterways near the protested parcels nor does it provide information on the groundwater resources potentially affected by hydraulic fracturing. Instead BLM again simply states that any impacts of hydraulic fracturing on water resources will be minimized due to regulations for well construction and casing. This assumption is insufficient to meet BLM's obligations under NEPA to take a "hard look" at the environmental impacts of its proposal and to disclose all foreseeable direct and indirect impacts to the public.

Furthermore, according to the EA, the preferred method of disposal of wastewater from hydraulic fracturing on the lease parcels in underground injection "into a suitable geologic formation isolated from freshwater aquifers." While BLM acknowledges that accidental leakage from these injection sites may cause contamination of ground water resources, it conducts no detailed analysis of the groundwater resources that may potentially be threated, and provides no basis for its reliance on the idea that following state regulations, best management orders, and the Onshore Orders will be sufficient to prevent groundwater contamination. Despite recent federal studies demonstrating that surface water can be contaminated as a result of deepwell underground injection wastewater disposal, BLM fails to even mention the impact of these disposal methods on surface waters. BLM's arbitrary reliance on the idea that following state

¹⁶ Id., at 7.

¹⁷ Troy Thompson, US Forest Service Whitepaper: A Summary of the Groundwater Resources of the Wayne National Forest, Aug. 15, 2012, available at:

http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5387929.pdf

¹⁸ Id. at 125, 126.

¹⁹ See Akob, D.M., Mumford, A.C., Orem, W.H., Engle, M.A., Klinges, J.G., Kent, D.B., and Cozzarelli, I.M., 2016, Wastewater disposal from unconventional oil and gas development degrades stream quality at a West Virginia injection facility, Environmental Science and Technology 50 (11), 5517 (2016); and see Kassotis, C.D., Iwanowicz, L.R., Akob, D.M., Cozzarelli, I.M., Mumford, A.C., Orem, W.H., and Nagel, S.C., Endocrine disrupting activities of surface water associated with a West Virginia oil and gas Industry wastewater disposal site, Science of the Total Environment, v. 557–558, p. 901-910 (2016).

regulations, best management orders, and the Onshore Orders will be sufficient to reduce any impact on ground water and surface water resources to a level of insignificance is in violation of NEPA's "hard look" requirement.

IV. BLM Violated the Endangered Species Act with Regard to the Consideration of Impacts to Threatened and Endangered Species

An unauthorized "take" of federally listed species is prohibited by Section 9 of the Endangered Species Act ("ESA"). The definition of "take" under the ESA is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harass in the definition of "take" is defined to mean "injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering." Harm is further defined to include significant habitat modification or degradation that results in injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. 22

In order to comply with the Endangered Species Act, the BLM must comply with a three -step process: 1) an agency must inquire the U.S. Fish and Wildlife Service as to whether any threatened or endangered species may be present in the area of the proposed activity; 2) if the answer is in the affirmative, the agency must prepare a biological assessment to determine whether such species is likely to be affected by the action; and 3) if the project is likely to affect listed species, formal consultation with U.S. Fish and Wildlife is required. This formal consultation requires the U.S. Fish and Wildlife Service to produce a "biological opinion" that evaluates the nature and extent of the proposed action's effect on the listed species, and posits reasonable and prudent alternatives to the proposed action.²⁴

The EA relies on a biological opinion from 2005, before proper evaluation of modern oil and gas mineral extraction.²⁵ According the EA:

...the Forest Service reviewed new information related hydraulic fracturing and whether there could be additional effects to threatened and endangered species that had not been previously analyzed in the 2006 forest plan and EIS. The Forest Service and the USFWS concluded that no further analysis or consultation was needed and that the consultation conducted under the 2006 Forest Plan and EIS was still valid.²⁶

Thus, despite unconventional drilling and hydraulic fracturing being acknowledged, there was not the required biological opinion on the activity currently being proposed by BLM for each listed threatened or endangered species likely to be adversely impacted. The action at issue

²⁰ 16 U.S.C.A. § 1532.

²¹ 50 C.F.R. § 17.3.

²² Id

²³ 16 U.S.C.A. § 1536; Montana Wilderness Ass'n v. Fry, 310 F.Supp.2d 1127 (D.Mont.2004).

²⁴ 16 U.S.C.A. § 1536(b)(3)(A); Ctr. for Food Safety v. Johanns, 2006 WL 2927121 (Oct. 11, 2006).

²⁵ EA, at 99.

²⁶ Id.

entails not only oil and gas leasing, "but all leasing and post-leasing activities through production and abandonment." Drilling and hydraulic fracturing in forested areas inevitably results in destroying trees and related plants vital to species habitat, and impacts on air and water. The Environmental Assessment contains a wholly insufficient analysis on the impact allowable mineral extraction will have on the particular endangered and threatened species at issue, and there is no required biological opinion evaluating the nature and extent of leasing and post-leasing impacts on each species and their habitat.

The Environmental Assessment lists a number of threatened or endangered species of animals that are or may be present in or near the Marietta Unit, including the following:

- Indiana bat
- Northern long-eared bat
- American burying beetle
- Bald eagle
- Fanshell mussel
- Pink mucket pearlymussel
- Sheepnose mussel
- Snuffbox mussel

The Assessment also identified a number of endangered or threatened plants in the area, including the following:

- Northern monkshood
- Running buffalo clover
- Small whorled pogonia
- Virginia spirea²⁸

The Assessment generally states that "[i]ncreases in mineral development would collectively result in direct loss of habitat, displacement of fish and wildlife, and habitat degradation and fragmentation." Yet, this impact is not fully analyzed for the listed species. The impact and potential taking of water-reliant species, such as the endangered or threatened mussels in the area, is also completely unaddressed. However, the Assessment states the following potential effects to surface water:

...sediment loading of stream channels due to the erosion associated with site development or operational transport and introduction of pollutants, toxic chemicals, sediment or debris, via spills and releases to surface from oil/produced water treatment, storage tanks, handling and sanitary facilities or oil/produced water transportation mediums (trucks or pipelines).³⁰

²⁷ Conner v. Burford, 848 F.2d 1441 (9th Cir.1988).

²⁸ EA, at 47-48, 99-100. There were are also a number of other species of wildlife identified as species of concern or public interest that similarly did not have a sufficient analysis regarding impacts from mineral extraction activities.
²⁹ Id., at 124.

³⁰ Id., at 104.

These effects are never elaborated on and applied to the endangered or threatened species listed. To conclude that these species are not likely to be adversely affected is arbitrary, capricious, and unreasonable given the inevitable consequences of oil and gas activities.

The allowance of oil and gas production activities will have a significant impact on wildlife and habitat, certainly including the endangered and threatened species in the area. Oil and gas development requires well pads, roadways, pipelines, and other related infrastructure that can lead to direct habitat and species loss and fragmentation, as well as displacement of wildlife due to increased industrial activity. Each well involves high volumes of water that leads to a cumulative result of water depletion. This can impact species reliant on these water sources. In addition, spills and wastewater releases lead to large-scale loss of, and impacts to, wildlife. Thus, these harms will likely result in takings and in declines of the threatened and endangered species within these areas.

What may be less obvious are the indirect effects oil and gas development have on wildlife in areas surrounding oil and gas production and development. The impacts related to development include noise and light pollution, which contribute to displacement of species from their habitats. These impacts are most notable in forest settings, where clearings can fragment forest patches and change habitat conditions for sensitive wildlife. The contribution to climate change and its effect on endangered and threatened species should also not be ignored. Climate change impacts negatively affect plant and animal species by changing their environment through temperature rise and other stresses, and thereby causing declines in populations. Consultation with the appropriate agencies and biological opinions should be conducted for all listed species likely to be impacted in these areas.

Furthermore, given the serious potential impacts on threatened and endangered species, a full Environmental Impact Statement is necessary. "Significantly" as used in NEPA includes "[t]he degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973." According to the Finding of No Significant Impact, even after review of new information relating to hydraulic fracturing, the Forest Service and the USFWS "concluded that no further analysis or consultation was needed and that the consultation conducted under the 2006 Plan/EIS was still valid." Given the nature of the area and wildlife subject to the activity, and the impacts that natural gas development will have on the area, this general conclusion is unreasonable. Simply put, the Assessment does not sufficiently consider oil and gas development in the area in order to contemplate possible effects on threatened or endangered species from the sale of oil and gas leases.

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³¹ Johnson, N., Pennsylvania energy impacts assessment: Report 1: Marcellus shale natural gas and wind, Nature Conservancy- Pennsylvania Chapter (2010), at 10-11, available at: http://www.nature.org/media/pa/tnc_energy_analysis.pdf

³² Root. T.L et al., Fingerprints of Global Warming on Wild Animals and Plants, 421 NATURE 57 (2003), available at; http://www.nature.com/nature/journal/v421/n6918/abs/nature01333.html
³³ 40 C.F.R. 1508.27(b)(9).

³⁴ FONSI, at 10.

Instead of completing an evaluation of impacts of extraction activities on all listed species, the EA claims that "leasing is an administrative action and would not result in impacts to species." To attempt to explain this puzzling position, BLM explains:

...there may be impacts associated with potential future mineral development. Should the leases be issued and a specific plan of development be proposed, additional site-specific NEPA analysis would be conducted including required ESA Section 7 consultation and/or surveys.³⁶

This piecemeal approach to environmental analysis has been rightly rejected by federal courts.³⁷ Indeed, "the scope of the agency action is crucial because the ESA requires the biological opinion to analyze the effect of the *entire* agency action."³⁸ This was further reasoned because "[c]aution can only be exercised if the agency takes a look at all the possible ramifications of the agency action."³⁹

The required steps for compliance with the ESA and NEPA were not met in this instance. Given the potential impact on endangered and threatened species, BLM must extensively evaluate the impact of future operations on the listed species and their habitats, including potential habitat in the area. In doing so, BLM should carry out a thorough, site-specific inventory, complete an EIS, and complete the required consultation with Fish and Wildlife, and all required biological opinions before leasing any of the parcels listed in this protest letter.

V. The BLM Action Does Not Comply with NEPA and Federal Requirements in Identifying and Addressing Environmental Justice Concerns

Federal agencies, mandated by Executive Order, must develop strategies for identifying

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A new climate of fairness.



Former, tal Legal Services

VIA FAX (202) 912-7798

State Director
Bureau of Land Management-Eastern States
20 M Street, Suite 950
Washington, D.C. 2003

Re: Protest of December 13, 2016 Lease Sale

Dear State Director:

Fair Shake Environmental Legal Services hereby files this Protest of the Bureau of Land Management ("BLM")'s planned December 13, 2016 oil and gas lease sale, pursuant to 43 C.F.R. § 3120.1-3, on behalf of FreshWater Accountability Project, Athens County Fracking Action Network, Buckeye Forest Council, Ohio Valley Environmental Coalition, Appalachian Mountain Advocates, Torch CAN DO, West Virginia Highlands Conservancy, Mountain Lakes Preservation Alliance, Radioactive Waste Alert, Columbus Community Bill of Rights, Guernsey County Citizens' Support on Drilling Issues, Frack Free Lake County, Sustainable Medina County, Ohio Allies, Frack Free Geauga, Network for Oil & Gas Accountability & Protection, Concerned Citizens Ohio, Friends for Environmental Justice, FaCT-Faith Communities Together for a Sustainable Future, Northwest Ohio Alliance to Stop Fracking, The Committee for the Youngstown Community Bill of Rights, Ohio Community Rights Network, Concerned Citizens of New Concord, Ohio River Citizens' Alliance, Ashtabula County Water Watch, and Headwaters Defense.

This letter is a formal protest of the inclusion of each of the following parcels located in the State of Ohio:

ES-003-12/2016 OHES 058185 ACQ ES-005-12/2016 OHES 058185 ACQ ES-007-12/2016 OHES 058185 ACQ ES-009-12/2016 OHES 058185 ACQ ES-011-12/2016 OHES 058185 ACQ ES-013-12/2016 OHES 058185 ACQ ES-015-12/2016 OHES 058185 ACQ ES-017-12/2016 OHES 058185 ACQ ES-019-12/2016 OHES 058185 ACQ ES-021-12/2016 OHES 058185 ACQ	ES-004-12/2016 OHES 058185 ACQ ES-006-12/2016 OHES 058185 ACQ ES-008-12/2016 OHES 058185 ACQ ES-010-12/2016 OHES 058185 ACQ ES-012-12/2016 OHES 058185 ACQ ES-014-12/2016 OHES 058185 ACQ ES-016-12/2016 OHES 058185 ACQ ES-018-12/2016 OHES 058185 ACQ ES-020-12/2016 OHES 058185 ACQ
ES-023-12/2016 OFIES 058185 ACQ	ES-024-12/2016 OHES 058185 ACQ

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Instead of completing an evaluation of impacts of extraction activities on all listed species, the EA claims that "leasing is an administrative action and would not result in impacts to species."35 To attempt to explain this puzzling position, BLM explains:

...there may be impacts associated with potential future mineral development. Should the leases be issued and a specific plan of development be proposed, additional site-specific NEPA analysis would be conducted including required ESA Section 7 consultation and/or surveys.36

This piecemeal approach to environmental analysis has been rightly rejected by federal courts.³⁷ Indeed, "the scope of the agency action is crucial because the ESA requires the biological opinion to analyze the effect of the entire agency action."38 This was further reasoned because "[c]aution can only be exercised if the agency takes a look at all the possible ramifications of the agency action."39

The required steps for compliance with the ESA and NEPA were not met in this instance. Given the potential impact on endangered and threatened species, BLM must extensively evaluate the impact of future operations on the listed species and their habitats, including potential habitat in the area. In doing so, BLM should carry out a thorough, site-specific inventory, complete an EIS, and complete the required consultation with Fish and Wildlife, and all required biological opinions before leasing any of the parcels listed in this protest letter.

The BLM Action Does Not Comply with NEPA and Federal Requirements in V. Identifying and Addressing Environmental Justice Concerns

Federal agencies, mandated by Executive Order, must develop strategies for identifying and addressing "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.... "MEPA is to be interpreted in light of this Executive Order. 41 Minority and low-income communities have historically been denied fair treatment, full information, and meaningful involvement in environmental decision-making. This has resulted in environmental pollution from industrial activities to occur disproportionally in minority and low-income communities.42

³⁵ EA, at 99.

³⁷ See Conner v. Burford, 848 F.2d 1441, 1453 (9th Cir.1988).

³⁹ Id., quoting N. Slope Borough v. Andrus, 642 F.2d 589, 608 (D.C.Cir. 1980).

⁴⁰ Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR

⁴¹ See Council on Envtl. Quality, Environmental Justice: Guidance Under the National Environmental Policy Act 1 (1997), at 21.

² ENVIRONMENTAL JUSTICE: EXAMINING THE ENVIRONMENTAL PROTECTION AGENCY'S COMPLIANCE AND ENFORCEMENT OF TITLE VI AND EXECUTIVE ORDER 12, 898 (2016), Executive Summary at 1, available at: http://www.usccr.gov/pubs/Statutory_Enforcement_Report2016.pdf

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BLM concluded that "[b]ased on a review of socioeconomic data for the five counties within and directly adjacent to the WNF, the potential for low-income environmental justice populations residing near the Marietta Unit does exist. ⁴³ The BLM further states that "oil and gas development within the Marietta Unit may result in impacts to people living near potential development sites, including potential low income populations." BLM goes on to state:

...exploration, drilling or production could create an inconvenience to people living adjacent to development areas due to increased traffic and traffic delays, as well as light, noise and visual impacts. These impacts would be particularly noticeable in areas where oil and gas development has not previously occurred, and other factors. Creation of new access roads would potentially allow increased public access and exposure of private property to vandalism. 45

Applying environmental justice concerns, the BLM then concludes that "[a]lthough there is a potential for future development within the Marietta Unit to affect low income populations in the area, the level of affect is not expected to be disproportionate and high...[t]herefore the proposed action would not be expected to result in environmental justice concerns."46

The analysis of impacts on environmental justice communities is deficient for many reasons. First, the analysis appears to be limited to construction activities and some general nuisances involved with development, but makes no mention of air emissions and pollutants and potential water contamination, and what impact these environmental consequences will have on environmental justice communities. Moreover, statistical research indicates that companies tend to site facilities in low-income communities that lack financial resources and the political clout necessary to meaningfully combat these decisions. Thus, BLM should have concluded that these communities will be disproportionately impacted by the allowance mineral extraction activities, and that these impacts will likely be adverse to human health and the environment.

Given the likely adverse human and environmental health impacts that mineral extraction will have on low-income environmental justice communities, at a minimum BLM should fully address these issues in an Environmental Impact Statement. The piecemeal analysis taken throughout the EA does not provide a necessary assessment for the cumulative impact of leasing these lands on these communities.

VI. BLM Did Not Properly Study the Impacts of Hydraulic Fracturing on Air Quality

⁴³ EA, at 80.

⁴⁴ Id. at 118.

⁴⁵ Id.

⁴⁶ Id., at 118-119.

⁴⁷ ENVIRONMENTAL JUSTICE: EXAMINING THE ENVIRONMENTAL PROTECTION AGENCY'S COMPLIANCE AND ENFORCEMENT OF TITLE VI AND EXECUTIVE ORDER 12, 898 (2016), at 6, citing Paul, M. & Saha, R. Which Came First, People or Pollution? Assessing Disparate Siting and Post-Siting demographic Change hypotheses of Environmental Justice, Environmental Research Letters (2015), available at: http://www.usccr.gov/pubs/Statutory_Enforcement Report2016.pdf

Under the Clean Air Act, the EPA must set National Ambient Air Quality Standards ("NAAQS") for six "criteria" air pollutants because of their potential to cause primary and secondary health effects. The pollutants include ozone, particulate matter ("PM"), carbon monoxide, nitrogen oxides ("NOx"), sulfur dioxide ("SO2") and lead, some of which have been shown to increase with oil and gas development. Yet, the EA includes no quantitative analysis of the foreseeable effect of oil and gas development from the lease sale on these criteria air pollutants.

The EA includes no analysis of the impact to air quality from compressor stations and additional infrastructure associated with oil and gas development from the lease parcels. A growing body of literature documents that operational emissions from compressor stations contain an array of air pollutants known to be harmful to human health, including volatile organic compounds ("VOCs"), carbonyls and aldehydes, hazardous air pollutants ("HAPs"), aromatics, and particulate matter at levels exceeding environmental safety limits. 48 These pollutants can be emitted during regular operations, "blowdowns," and accidents, and can come from equipment leaks and evaporative sources. BLM's statement that "[f]uture mineral development operations within the Marietta Unit that would violate a state and/or federal air quality standard would not be approved" is not sufficient to address the concerns raised by compressor stations, whose operational emissions have been shown to harm air quality to a degree that is harmful to human health and safety.

In order to adequately account for the foreseeable impact the proposed lease sale will have on air quality, BLM was required to complete a full EIS that included site-specific analysis of the parcels offered for leasing.

BLM Failed to Properly Assess and Account for the Impacts of Hydraulic VII. Fracturing on Public Health

Despite a growing body of literature documenting the adverse health impacts of hydraulic fracturing, the EA includes no discussion of the impacts studies show oil and gas development has on human health and safety. Instead, the BLM relies on the its allegation that this is a strictly administrative action, and therefore it need not analyze potential health effects, stating:

[t]hrough the NEPA process and adherence to federal, state, and local regulations, laws, permits and policy, as well as numerous safety standards and protocols, the BLM and Forest Service ensures that future oil and gas leasing operations would not compromise

⁴⁸ See Pennsylvania Department of Environmental Protection, Air Emissions Data from Natural Gas Operations (2013), http://www.dep.pa.gov/Business/Air/BAQ/BusinessTopics/Emission/Pages/Marcellus-Inventory.aspx#.Vs_BSJMrKCQ; see also Texas Commission on Environmental Quality, Barnett Shale Formation Area Monitoring Projects (2010),

http://www.tceq.state.tx.us/assets/public/implementation/barnett_shale/2010.01.27-BarnettShaleMonitoringReport.pdf; see also Wolf Eagle Environmental, Town of DISH Texas Ambient Air Monitoring Analysis Final Report (2009), available at http://townofdish.com/objects/DISH_final_report_revised.pdf.

49 EA, at 109.

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public health and safety. Additional site-specific analysis on public health and safety will be conducted at the APD stage. 50

However, as explained throughout this letter, such a piecemeal approach is not permissible under NEPA. Studies have found residents living near oil and gas wells using the hydraulic fracturing method of recovery experience higher rates of cancer, endocrine disrupting activity, headaches, nausea and vomiting, eye and throat irritation, and lower birthweights in newborns.51 BLM should have conducted a thorough analysis of the health impacts posed by oil and gas development on the protested parcels, and the health impacts of hydraulic fracturing in particular.

BLM relies on the fact that future mineral development in violation of state or federal law would not be approved as a basis for their conclusion that any future leasing operations would not compromise health and safety. However, compliance with state and federal law does not guarantee that future oil and gas development will not pose a threat to human health and safety, nor does it even create a presumption that the development activity would not threaten human health and safety or reduce impacts to human health and safety to the point of being insignificant.

To provide an example, as described in Section VI of this letter, operational emissions from compressor stations emit VOCs and HAPs that are known to be hazardous to human health. Short-term exposure to some VOCs is known to cause eye and respiratory irritation, headaches, dizziness, loss of coordination, and nausea, and long term exposure can cause damage to the liver, kidneys, and the central nervous system. VOCs benzene, styrene, and formaldehyde are also known carcinogens, and the inhalation of benzene can cause blood disorders including reduced numbers of red blood cells and aplastic anemia. 52 The literature indicates there is likely no safe level of exposure to benzene. 53 Inhalation of particulate matter can lead to acute increases in blood pressure. 54 Inhalation of methylene chloride, which has also been detected near compressor stations, harms the central nervous system, impairing visual, auditory, and motor functions. 55 Yet, the EA contains no thorough analysis of the impact of compressor stations and additional infrastructure associated with hydraulic fracturing.

⁵⁰ EA, at 109

⁵¹ McKenzie, L. et al., Human Health Risk Assessment of Air Emissions from Development of Unconventional Natural Gas Resources, 424 SCIENCE OF THE TOTAL ENVIRONMENT 79 (2012); Rabinowitz, P.M. et al., Proximity to Natural Gas Wells and Reported Health Status: Results of a Household Survey in Washington County, Pennsylvania. Environmental Health Perspectives Advance Publication (2014); Bamberger, Michelle and R.E. Oswald, Impacts of Gas Drilling on Human and Animal Health, 22 NEW SOLUTIONS 51 (2012); Steinzor, N. et al., Gas Patch Roulette: How Shale Development Risks Public Health in Pennsylvania, Earthworks Gas & Oil Accountability Project (2012).

⁵² U.S. Environmental Protection Agency, Benzene, TECHNOLOGY TRANSFER NETWORK-AIR TOXICS WEBSITE

^{(2012),} https://www3.epa.gov/ttn/atw/hlthef/benzene.html.

53 Martyn T. Smith, Advances in Understanding Benzene Health Effects and Susceptibility, ANNUAL REVIEW OF PUBLIC HEALTH (2010), available at http://superfund.berkeley.edu/pdf/328.pdf.

⁵⁴ J. Timothy Dvonch, et al., Acute Effects of Ambient Particulate Matter on Blood Pressure: Differential Effects across Urban Communities, Hypertension (2009); 53(5): 853-859, available at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3593813/.

⁵⁵ U.S. Environmental Protection Agency, Methyl Chloride, TECHNOLOGY TRANSFER NETWORK-AIR TOXICS WEBSITE (2000), https://www3.epa.gov/ttn/atw/hithef/methylen.html.

BLM's failure to conduct an analysis of the impacts of oil and gas development on human health and safety, but to instead arbitrarily assume that compliance with federal and state law is sufficient to reduce any health and safety concerns to a level of insignificance, is arbitrary, capricious, and unlawful, and is a violation of NEPA.

VIII. The BLM Failed to Adequately Consider the Seismic Risks and Other Geological Hazards of Unconventional Oil and Gas Drilling and Disposal

Unconventional oil and gas development, including hydraulic fracturing and the disposal of oil and gas wastes, involves high pressure injection of fluids into the earth. Fluid injections have been linked to induced seismic events. Induced seismic events have the potential to cause earthquakes and landslides, which result in damage and destruction of property. Youngstown, Ohio recently experience over 100 earthquakes in just over a one-year timeframe due to injection well activity. In the service of the disposal of the di

In the EA, BLM states that:

...potential geologic hazards may result from future development and production operations. Induced seismic activity, events attributable to human activities, may include landslides and earthquakes. Landslides involve mass movement of earth materials down slopes and can include debris flows, soil creep and slumping of large blocks of material. Earthquakes occur when energy is released due to blocks of the earth's crust moving along areas of weakness of faults.⁵⁸

Despite acknowledging these risks, the EA does not go on to analyze the site specific risk of increased seismic activity, or the risk of resulting increased disposal of wastes by underground injection.

Data on the risk and frequency of these events are still being gathered and studied in the scientific community. Given the great potential for damage should a seismic event be induced, it would be prudent for BLM to err on the side of caution when deciding to lease land, and assure that this risk is as minimal as possible. Moreover, BLM should not contribute to overall increase in oil and gas waste by leasing, thereby increasing the amount of waste to be disposed of through high pressure injection wells. Accordingly, an Environmental Impact Assessment is necessary to fully assess the risk of increased induced seismic activity caused by increased extraction and injection activities.

⁵⁶ See Elisworth, W.L. Injection-Induced Earthquakes, 341 SCIENCE 1225942 (2013), available at: https://scits.stanford.edu/sites/default/files/science-2013-ellsworth.pdf See also Keranen, Katie et al., Potentially Induced Earthquakes in Oklahoma, USA: Links Between Wastewater Injection and the 2011 Mw5.7 Earthquake Sequence, GEOLOGY (2013), available at:

https://profile.usgs.gov/myscience/upload_folder/ci2013May3015351271984Keranen%20etal%20Geology%202013.pdf

[.]pdf
⁵⁷ Folger, P. & Tiemann, M., Human-Induced Earthquakes from Deep-Well injenction: A Brief Overview,
Congressional Research Services (2016), at 9, available at: https://www.fas.org/sgp/crs/misc/R43836.pdf
⁵⁸ EA, at 102.

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IX. BLM Failed to Adequately Assess the Effects of Climate Change on the Direct and Indirect Environmental Impacts of the Proposed Action

In addition to assessing the impact a proposed action will have on climate change, NEPA review should also consider the effects of climate change on a proposed action and its environmental impacts. ⁵⁹ The present and future impacts of global climate change, including, among many others, increased frequency and intensity of heat waves, more severe drought and precipitation events, and harm to wildlife and ecosystems, alter the environment in which a proposed action will generate its own environmental impacts. It is therefore necessary to assess the effects of a proposed action with present and future impacts in the environmental context of climate change.

BLM failed to assess or quantify how climate change would alter or amplify the environmental impacts of oil and gas development in the Marietta Unit. Such assessment is particularly relevant to the proposed action because of the high likelihood of hydraulic fracturing and the environmental impacts particular to this form of gas development. Analysis of the extensive water use and contamination associated with hydraulic fracturing in a region facing increased water shortages is "squarely within the scope of NEPA and can inform decisions on whether to proceed with" the proposed action. 60

BLM acknowledges the impacts of global climate change on the human environment yet fails to consider the impacts of a changing climate on the myriad environmental impacts of the proposed action. ⁶¹ This failure leads to the gross underestimation of the already significant identified impacts of the proposed action. BLM must adequately assess the impacts of the proposed lease sale in the context of the increasingly vulnerable water resources and ecosystems which will be affected.

X. BLM Failed to Adequately Assess the Quantity and Impacts of Methane Emissions

Methane, the primary component of natural gas, is a far more potent greenhouse gas than carbon dioxide. BLM acknowledged that fugitive methane is one of the major sources of greenhouse gas emissions expected to result from the proposed action, but it failed to appropriately assess its foreseeable impact. BLM primarily relied on a single study to assess the climate change impacts of the proposed action and based its estimates of methane impacts on an outdated value for methane's global warming potential (GWP) factor, the factor which converts a given quantity of a greenhouse gas into the quantity of carbon dioxide with an equivalent impact on climate change.

⁵⁹ Council on Environmental Quality, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 20 (2016) [hereinafter CEQ Guidance] available at

https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf. 60 CEQ Guidance, at 21.

⁶¹ See EA, at 38.

⁶² See EA, at 85

⁶³ See EA, at 86.

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The 2011 study from which BLM directly drew its estimates for the reasonably foreseeable impacts of the proposed action on global climate change employs an outdated GWP factor for methane. While the study estimates the lifecycle impacts of Marcellus shale gas development using the 100-year GWP factor for methane of 25, current estimates are 34. This increase has significant implications for the projected impacts of any methane emitted throughout the drilling, production, storage, and transportation of shale gas, and estimates based on the outdated GWP factor materially underestimate impacts. Similarly, the study BLM relied upon uses outdated estimates of the 20-year GWP factor for methane in reaching its conclusions. This factor is now estimated at 86, significantly higher than the previous estimate of 72. BLM must evaluate the impacts of methane emissions based on current scientific understanding of methane's GWP. Additionally, BLM must evaluate both the short and long term effects of these emissions.

BLM has also failed to adequately or accurately analyze and compare the effects of fugitive methane emissions in conventional wells and from hydraulic fracturing. The study relied upon employs a 2% fugitive emissions rate, which is dramatically lower than more rigorously researched estimates. Conservative estimates suggest a rate of fugitive emission from well completion to transport, storage, and distribution of between 3.6% and 7.9%. This rate is at least 30% and potentially more than 50% greater than fugitive emissions from conventional gas development. Great uncertainty exists regarding the actual range of fugitive emission rates but studies indicate that the actual rates may be 2 to 3 orders of magnitude greater than the EPA estimates relied upon in the study cited by BLM. By relying on inaccurate estimates of fugitive emissions, BLM further underestimated the impacts of the proposed action on global climate change. BLM must accurately assess the quantity and associated impacts of methane emissions from shale gas development to satisfy NEPA and provide adequate information for informed decision-making.

XI. BLM Violated NEPA when it Failed to Conduct an Adequate Analysis of Available Alternatives to the Proposed Lease Sale

For the reasons stated in the sections above, the significant uncertainties and known risks posed by hydraulic fracturing for groundwater contamination, air pollution, seismic activity, GHG emissions, and harm to wildlife require that BLM prepare an EIS seriously considering and fully analyzing alternative actions. NEPA Section 102(2)(E) requires that, "to the fullest extent

⁶⁴ See Jiang, et al., Life cycle greenhouse gas emissions of Marcellus shale gas, Environmental Research Letters (August 2011).

⁶⁵ See INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, Working Group I Contribution to the IPCC Fifth Assessment Report Climate Change 2013: The Physical Science Basis, at 714 (Table 8.7) (Sept. 2013) available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf.

⁶⁶ Id.

⁶⁷ See 40 C.F.R. § 1508.27(a).

⁶⁸ Robert W. Howarth, et al., Methane and the greenhouse-gas footprint of natural gas from shale formations, CLIMATIC CHANGE, at 683 (Table 2) (2011).

⁷⁰ See Dana R. Caulton, et al., Toward a better understanding and quantification of methane emissions from shale gas development, PNAS, (April 29, 2014).

possible," agencies "[u]se the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment." Specifically, BLM must fully consider the alternatives of offering no new leases, and offering leases for vertical drilling only.

BLM explored the No Action Alternative solely in the interest of providing a baseline for comparing potential impacts of proposed alternative actions. A No Action alternative studying the impact of no new leasing must be comprehensively and seriously considered, taking into account the impacts of continued oil and gas development on human health, environmental health, and global climate change. The benefits of this alternative must be quantified to provide sufficient information to make an informed decision. BLM's exclusive focus on the economic benefits of mineral development runs counter to its mission "to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations."

BLM acknowledged the alternative of offering all leases with a vertical drilling only stipulation, but it dismissed it without evaluating its impacts. Banning hydraulic fracturing and other unconventional well stimulation methods would prevent the many environmental harms associated with these practices and must be considered in alternatives analysis. BLM states that such a ban would "be tantamount to a ban on development of the Utica, Marcellus, and other tight formations underlying the forest." NEPA states that the "NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." Full analysis of such a ban is critical to understanding the impacts which will result from the proposed action

XII. By Failing to Conduct an Independent Review and Consenting to the Proposed Lease Sale Prior to an Adequate NEPA Review, the Forest Service Violated NEPA

In order to offer leases in the Wayne National Forest, BLM must first obtain the consent of the Forest Service. The Forest Service may only grant this consent after verifying that "leasing of the specific lands [1] has been adequately addressed in a NEPA document, and [2] is consistent with the Forest land and resource management plan." The Forest Service is explicitly prohibited from authorizing leasing "[i]f NEPA has not been adequately addressed, or if there is significant new information or circumstances as defined by 40 CFR 1502.9 requiring further environmental analysis," or "[i]f there is inconsistency with the Forest land and resource management plan." As the above sections of this letter detail, NEPA has not been adequately addressed by the EA, which fails to sufficiently account for the impacts of hydraulic fracturing

⁷¹ 40 CFR 1502.14.

⁷² EA, at 30.

a Id.

⁷⁴ Id.

^{75 40} CFR 1500.1(c).

⁷⁶ See 30 U.S.C. § 226(h), (stating "The Secretary of the Interior may not issue any lease on National Forest System Lands reserved from the public domain over the objection of the Secretary of Agriculture.").

⁷⁷ 36 C.F.R. § 228.102(e)(1). ⁷⁸ 36 C.F.R. § 228.102(e)(1).

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on the human environment. The 2006 Forest Plan EIS and the 2012 SIR also fail to adequately address NEPA requirements for the proposed lease sale. Therefore, the Forest Service cannot lawfully give its consent to the proposed lease sale until NEPA has been adequately addressed.

The Forest Service has a duty to "be alert to new information that may alter the results of its original environmental analysis, and continue to take a hard look at the environmental effects of its planned action." BLM's adoption of an EA and its issuance of a FONSI does not relieve the Forest Service of this obligation. The statutory and regulatory requirement that the Forest Service give its consent prior to BLM leasing minerals under National Forest lands makes the Forest Service a "cooperating agency" under NEPA. 81

While BLM as the "lead" agency has primary responsibility for preparing the NEPA document, ⁸² cooperating agencies may "adopt an environmental assessment that another federal agency has prepared, so long as the agency adopting the assessment reviews it and accepts responsibility for its scope and content." ⁸³ "If the [cooperating] agency adopts an environmental assessment, however, it must issue its own FONSI." With regard to the proposed lease sale, the Forest Service did not issue its own FONSI, and there is no indication or evidence that it independently reviewed the EA and accepted responsibility for its scope and content. The Forest Service's complete reliance on BLM's judgment is improper and "is in fundamental conflict with the basic purpose of NEPA," which is "to require federal agencies to make an informed judgment of the balance between the economic and technical benefits of an action and its environmental costs."

The Forest Service's failure to conduct its own independent environmental analysis as required by law deprives the public of meaningful agency review and the additional information that may result from it. This absence of an expert assessment by the Forest Service negatively affects the people of Ohio's ability to understand the foreseeable direct and indirect impacts of the proposed lease auction on the only National Forest existing within their state.

Until the Forest Service has conducted its own supplemental review of the proposed lease sale, its consent to the sale is invalid, and it is unlawful for BLM to proceed with the lease sale.

Requested Relief

For the reasons included herein, the protesting parties request that BLM withdraw the protested parcels from the December 2016 lease sale until it has complied with federal laws and regulations, including NEPA and the ESA. Specifically, they request that BLM prepares an EIS that fully and precisely analyzes the environmental impacts of the proposed lease sale as compared to alternatives of no new leasing or no hydraulic fracturing and no unconventional development alternatives. In addition, the protesting parties request that BLM withdraw the

Kunaknana v. United States Army Corps of Eng'rs, 23 F. Supp. 3d 1063, 1070 (D. Alaska 2014).
 See 30 U.S.C. § 226(h); 36 C.F.R. § 228.102(e)(1).

^{81 40} C.F.R. § 1501.6(a).

^{82 40} C.F.R. § 1501.6.

⁸³ Anacostia Watershed Soc'y v. Bahhitt, 871 F. Supp. 475, 485 (D.D.C. 1994).

⁸⁵ Id., at 484 (internal quotation marks and alterations omitted).

protested parcels from the lease sale until the Forest Service has conducted a thorough independent review of the environmental impacts of the proposed lease sale.

Thank you for your consideration of this protest letter. For your records, the names and contact information for each of the protesting parties are as follows:

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Should you have any questions, or would like to discuss anything in this protest letter, please contact the undersigned counsel filing this letter on behalf of the above protesting parties.

Sincerely,

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